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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,972	05/15/2001	Kevin P. Martin	062002-1751	1603

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EXAMINER

HASSANZADEH, PARVIZ

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 09/11/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/855,972

Applicant(s)

MARTIN ET AL.

Examiner

Parviz Hassanzadeh

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-35 is/are pending in the application.
- 4a) Of the above claim(s) 20-22 and 27-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19 and 23-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☒ Interview Summary (PTO-413) Paper No(s). 5
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Species 2 in Paper No. 4 is acknowledged. The traversal is on the ground(s) that claims 19 is fully generic on at least species 1 and 2. This is not found persuasive because as discussed in the Examiner interview in paper No. 5, claim 19 does not include the special features of species 2 and 3. It is suggested to include the limitation of claim 23 in claim 19 in order to claim the elected species 2 appropriately.

The requirement is still deemed proper and is therefore made FINAL.

Claims 20-22 and 27-35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species 1 and 3, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 4.

Specification

The disclosure is objected to because of the following informalities:

on page 1, line 16, page 4, line 24, and page 9, line 23, it is suggested to insert “now US Patent No. 5,882,538”;

on page 13, line 20, and on page 19, line 11, it is suggested to insert the serial number “08/899,341” and the US patent number “5,917,285”.

Appropriate correction is required.

The abstract of the disclosure is objected to because the abstract is describing a method rather than an apparatus, it is suggested to revise the abstract to more closely reflect the claimed apparatus. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

Claims 19 and 23-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 19, line 3, the limitation “mechanical support isolated from the creation of the plasma” is vague; however, for the purpose of examination it is interpreted as “the mechanical support does not constitute a means for generating plasma”.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 19 and 23-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaji et al (US Patent No. 5,290,993).

Kaji et al teach an apparatus (Fig. 1) for plasma etching a sample 14, the apparatus comprising:

a bell jar 3 and a vessel 4 defining a plasma generating and plasma processing space (*plasma reactor*), wherein the plasma is generated by a microwave generator 1; and

a sample table 10 (*mechanical support within the plasma reactor*), wherein the sample table 10 is coupled to an AC power source 16 and a DC power source 18 for applying a bias voltage on the sample table 10 (*the support is electrically connected to both a dc and an ac bias source*) (column 2, line 41 through column 3, line 41).

Claims 19 and 23-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Gorin (US Patent No. 4,464,223).

Gorin teaches an apparatus (Fig. 2) for plasma etching a workpiece, the apparatus comprising:

a reactor defining a reaction volume 20 (*plasma reactor*), wherein the plasma is generated by a high frequency power source 30 coupled to a plasma generating electrode 12; and a workpiece support electrode 14 (*mechanical support within the plasma reactor*), wherein the workpiece support electrode 12 is coupled to an AC power supply 36 and a DC power supply 42 for applying a bias voltage on the workpiece support electrode 12 (*the support is electrically connected to both a dc and an ac bias source*) (column 2, line 7 through column 3, line 17).

Claims 19 and 23-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Okano et al (JP 56-81678-A)).

Okano et al teach an apparatus (Fig. 5) for plasma etching a material, the apparatus comprising:

a *plasma reactor* 36, wherein the plasma is generated by a high frequency power source 31 coupled to discharge electrodes 28, 29; and

an electrode 25 supporting a material 26 to be etched (*mechanical support within the plasma reactor*), wherein the material support electrode 25 is coupled to an AC power supply 33 and a DC power supply 35 for applying a superimposed bias current on the material support electrode 25 (*the support is electrically connected to both a dc and an ac bias source*) (abstract describing Fig. 3 having components similar to those shown in Fig. 5).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 19 and 23-26 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 29-32 of U.S. Patent No. 6,033,587. Although the conflicting claims are not identical, they are not patentably distinct from each other because in claims in the present application are essentially similar to claims in the US Patent No. 6.033,587.

Claims 19 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al (US Patent No. 6,033,587).

Martin et al teach an apparatus (Fig. 1) for low-damage anisotropic dry etching of a substrate, the apparatus comprising:

a plasma reactor; and

a mechanical support within the plasma reactor, wherein the mechanical support is coupled to an AC electrical bias or a DC electrical bias or both (column 9, line 55 through column10, line 52, and claims 24-32)

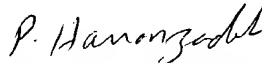
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tamura et al (US Patent No. 5,906,684) teach a plasma reactor including a substrate holding system coupled to both a DC power source 13 and an AC power source 12 (Fig. 10).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Parviz Hassanzadeh whose telephone number is (703)308-2050. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory L. Mills can be reached on (703)308-1633. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9310 for regular communications and (703)872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.


Parviz Hassanzadeh
Examiner
Art Unit 1763

September 6, 2002